

# **HYPERTENSION**

The 20th century is described as the age of anxiety and stress. The modern man is constantly facing symbolic stress. This stress and strain of day to day life affects one's bodily organs through several psycho-physical mechanisms.

The progress of medical science has helped us to conquer disease like plague, smallpox etc., but stress related diseases are rapidly increasing. Among the several psychosomatic diseases, the cardiovascular disorder like Hypertension is quite significant.

'Hypertension' (persistent raised arterial pressure) although, the handy literature is not observed in Ayurvedic classic, review of previous theoretical and clinical works on this topic point out certain mode of involvement of dosha and dushya in the genesis of it. Most of efforts shows a prime role of vata in association of remaining dosha pitta kapha. Also, Acharya Charaka permit to treat such disease without nomenclature by judging the involvement of dosha dushya only (Cha.Su.20).

## **HYPERTENSION**

**SYNONYMS : High Blood Pressure**

### **Hyperpiesia**

High blood pressure or hypertension is a circulatory state, arise from any cause, in which the pressure of the blood with in the arteries becomes elevated beyond normal limits. In general the term includes any rise in arterial pressure whether temporary involving systolic pressure, diastolic pressure or both of renal or normal origin. (British Encyclopedia of Medical Practice P.508).

According to W.H.O the blood pressure of 160/95 mm of Hg or higher should always be considered as hypertension (High blood pressure). Blood pressure in between is considered as borderline or possible hypertension.

The rise of persistent systemic arterial diastolic blood pressure above 100 mm of Hg. or more , is more risky than rise of systolic blood pressure. Generally systolic and diastolic hypertension occur together. Systolic hypertension is caused from increased cardiac output or arterial rigidity in aged. Arterial rigidity by arteriosclerosis, affecting intima of arterioles and capillaries of vital functional organs is pathogenic. Diastolic hypertension develops from the increased vascular resistance to the blood flow at the level of arterioles. In capillaries the blood flow is slow, hence, there is no development of resistance. ( Quarterly Medical Review, 1984)

### **Classification of Hypertension by Etiology:**

- A. Essential or Primary Hypertension
- B. Secondary Hypertension

## **ESSENTIAL HYPERTENSION**

**Synonyms :** Primary Hypertension

### **Idiopathic Hypertension**

Blood pressure is caused by various complete series of factors controlling blood vessels calibre response control of fluid volume within and outside the vascular bed, and resultant cardiac output. All such factors are interrelated with each other making it difficult to determine a single or sure causes for hypertension. Thus, when the definite cause can not be determined or established the hypertension is called as essential hypertension. It was named as essential under belief that it springs up as essential for

proper circulatory functions of the blood in all organs. But now it is defined as hypertension, the causes of which are not definitely known. Constant diastolic hypertension above 90 mm of Hg. Or systolic above 140 mm of Hg. or both, considering age factor rise and judging transient fluctuation with due care can be termed as essential hypertension.

About EHT we may conclude that –

- a) Among all hypertensives 95% patient suffer from EHT.
- b) The constitutional (genetic) dietary and environmental factors are involved in rising arterial pressure in EHT.
- c) This is associated with impaired endothelium mediated vasodilatation.

### **CHIKITSA / MANAGEMENT**

The radical removal of causative factors of the disease as well as the doshic equilibrium in the body is known as Chikitsa (Cha.Su.9/5). Chikitsa comprehends following measures in Ayurveda viz : Preventive and prophylactic therapy

#### **Curative therapy**

The previous goal of the path of achievement and maintaining a healthy body can attain with the help of Rasayana, Vajikarana and Swasthivrita palan described in Ayurveda. The later curative therapy is comprehended generally to eliminate the disease in the ailing. The curative treatment can be divided into four sub groups (Cha.Vi.8) viz :

Shodhana  
Shamana  
Ahara  
Achara

Ahara and Achara comes under nidana parivarjana. The patient and the disease carefully and collectively must be in the mind of physician at the time of therapy for any ailment. Acharya Vagbhatta has vividly described the factors of consideration while treating a patient suffering from any disease (A.H.Su.12/67- 68). Variations relating to dushyas, dosha, drug, place, time, strength, body, diet, mind, constitution and agni should be minutely observed. By this proper care and stepwise journey to the disease physician never fail in the selection of medicaments and therapies.

### **MANAGEMENT OF ESSENTIAL HYPERTENSION**

Management of hypertension is divided into two categories :

1. Management without medication
2. Management with anti-hypertensive medication.

#### **Management without medication :**

On the basis of several researches WHO has settle some life style measure / alterations for lowering the blood pressure which are applicable for both population and individual approach. Interventions that clearly lower the blood pressure are :

a). Weight reduction

Weight reduction of, as little as 5 kg reduces the blood pressure in a large proportion of hypertensive individuals who are more than 10% overweight and also has a beneficial effect on associated risk factors such as insulin resistance, diabetes, hyperlipidaemia and left ventricular hypertrophy.

b). Reduction of alcohol

Not with standing the evidence that an alcohol intake upto three standard drinks a day may lower the risk of coronary heart disease. Alcohol attenuates the effect of anti-

hypertensive drug therapy but, its pressure effect is, at least partially, reversible within 1-2 weeks by moderation of drinking by around 80%.

Hypertensive patients who drink alcohol should be advised to limit their consumption to not more than 20-30 gms of ethanol per day for men, 10-20 gms for women. They should be warned against the heightened risks of stroke associated with binge drinking.

c). Reduction in salt intake

Salt play an important role in regulation of amount of extra cellular fluid. Daily need of salt intake among human beings estimated between 1-5 mmol studies from all over the world have now demonstrated that higher the initial level of blood pressure, greater the fall after sodium restriction and meta-analysis of several clinical trials in hypertensive subject revealed and SBP / DBP reduction of 4.9 / 2.6 mm of Hg in one to two months associated with a 56-105 mmol reduction in daily sodium intake. The effects of sodium restriction may take several weeks to become evident (Hypertension control WHO TRS 862,1996).

The reason for this is that these patients have a less responsive reninangiotensin system to salt restriction and have less rise in renin release and less rise in circulating angiotensin II. This inhibition of the normal compensatory responses allows a larger fall in the blood pressure. Therefore, patients with hypertension must be recommended the reduction of salt intake in their daily meals (Hypertension in practice, D.G.Beevers, G.A.Macgregor 2<sup>nd</sup> ed., 1985).

d). Increased physical activity

Sedentary patients should be advised to take up modest levels of aerobic exercise on a regular basis, such as a brisk walk or a swim for 30-45 minutes, 3- 4 times a week. Such mild exercise may be more effective in lowering the blood pressure than more strenuous forms of exercise and may lower the systolic pressure by 4-8 mm of Hg.

e). Dietary fibre

A dietary fibre consists of complicated carbohydrate substances and is useful in the prevention of constipation by increased intestinal transit times. Increasing fibres in the daily meals give advantage with greater consumption of fruit and vegetables and dietary fibre content might lower the blood pressure.

f). Cessation of tobacco smoking

Cessation of tobacco smoking is perhaps the single most powerful life style measure for the prevention of both cardiovascular and non-cardiovascular diseases in hypertensive patients.

g). Relaxation

The most effective way of lowering the blood pressure is to sleep. This fall in the blood pressure during sleep is largely due to relaxation therapies, e.g. biofeedback, transcendental meditation, yoga, sleep therapy and psychotherapy are very helpful to combat psycho-social stress in hypertensive patients. Dhyana (Meditation), Satvika ahara (Yogic dietary regimen) and Fasting are also useful to control the high blood pressure. In this way holistic approach towards hypertension is very useful to control the blood pressure as well as its complications (Discovering human potential energy by Dr. Lajpat Rai published by Central Council of Yoga and Naturopathy)

**Goals of treatment:**

The primary goal of the treatment of the patient with the high blood pressure is to achieve the maximum reduction in the total risk of cardiovascular morbidity and mortality, and to restore the blood pressure to levels defined as normal or optimal.

**Drug therapy for Essential Hypertension:**

The six main classes used, worldwide for lowering the blood pressure are :

Diuretics, beta-blockers, calcium antagonists, ACE-inhibitors, angiotensin II antagonists and alpha-adrenergic blockers. In some parts of the world, reserpine and methyldopa are also used frequently.

**Guidelines for selecting the drug treatment of hypertension:**

**Diuretics: Chlorthalidone**

Indepamide

Frusemide

Bumetanide

Amiloride

Spiroinolactone

**Beta-blockers: Atenolol**

Metoprolol

Propranolol

Oxprenolol

Pindolol

**ACE-inhibitors: Captopril**

Enalapril

Lisinopril

Quinapril

Ramipril

**Calcium-antagonists: Amlodipine**

Nicardipine

Nifedipine

Verapamil

Diltiazem

**Alpha-blockers: Doxazosin**

Prazosin

Terazosin

**Other drugs:**

Drugs' acting on central nervous system, such as reserpine is used in low-income populations because of its cost effectiveness. It should be used in lower doses and used in combination with diuretics. On the other hand, methyldopa remains an important well-validated agent for the effective treatment of hypertension in pregnancy. The vasodilator agents such as hydrazine and minoxidil are also widely used in some regions of the world.

Now a day, combination drug therapy has been popularized as it minimizes side effects due to their usage in low doses.

**SHIRODHARA**

Acharya Charaka has defined snehana as the treatment, which produces viscosity, softness, solubility and kleda in the body (Cha.Su.22/10). Snehana is one among the shadvidhopakramas. There are two routes to administer the sneha viz. external and internal. External by Abhyanga, Murdha taila etc. and internal by Pana, Basti, Nasya etc. The Murdha Taila is having four varieties namely, Abhyanga, Seka, Pichu, Basti. They are told uttrottara gunaprada.

(A.H.Su.22/23) But as Murdha Taila is concerned, Abhyanga is used in day to day life routinely and Seka or Dhara in most of the diseases. Dhara is not only used in psychic diseases but, also used in psychosomatic diseases like psoriasis. Dhara is done by different medicaments like taila, takra, kshira, kwatha etc. In the southern Dhara therapy is most commonly practiced.

**Indications:**

Ardhavabhedaka, Suryavarta, Ardita, Pakshagata, Hanugraha, Akshisula, Nidranasha, Shirotatavata, Shirahkampa (Cha.Sam., Sr.Sam. Y.R).

**Contra-ndications of Shirodhara:**

Kaphajavikaras-Shirodhara further increases kapha, which makes the diseases difficult to cure.

**Method of Pouring of Dhara:**

The procedure of Dhara may be divided into three stages for the descriptive purpose:

- 1). Purvakarma
- 2). Pradhanakarma
- 3). Pashchatkarma

**1). Purvakarma:**

Purvakarma is related with the preparation of the patient. First, it should be confirmed that the patient is fit for shirodhara or not. Patients who are suffering from headache, pinus, sankhaka, suryavarta, arunshika, pratishyaya, shirodaha, shiropaka, shirovrana, anidra, timira, karnaroga, akshiroga, valita, palita, murchha etc. diseases are fit for shirodhara. It is advisable for the better results that the hairs of the patient on the scalp should be removed, if the patient permits. The patient should pass stool and urine. Then patient's pulse, temperature, blood pressure should be recorded.

Proper posture of the patient is the supine position and dharapatra should be brought 4 inches above his head. The eyes and ears should be covered with cotton so that, liquid may not enter in the eyes. His head rests in slightly elevated position, preferably on wooden piece. The anointing of oil generally done at first by the physician and then by attendants all over the body of the patient.

**Aushadha (Drug):**

The drug should be selected according to the disease. The quantity required is above 1-2 kg or 2-3 litre approximately.

**2). Pradhanakarma:**

The selected liquid should be kept in the vessel and be poured continuously and slowly on the forehead of the patient. A mild oscillation should be given so, as to maintain the flow all over the forehead. This liquid gets collected in the vessel, which is kept below the table, which the liquid in the vessel gets emptied, then it is replaced from the lower vessel.

**Temperature of the Sneha / Liquid:**

It should be Sukhoshana near about to the body temperature.

**3). Pashchatkarma:**

After completing shirodhara the oil/liquid from the head should be removed by a piece of cloth. Then the patient may be advised to drink ghee or medicated ghee according to the disease. His eyes should be washed with cold water, he should removed cough. He

should take mild wind. He should rest for sometime. Then he should take bath with hot water. Then he should take light Diet and he should drink water, which is sidha with vatanashka aushadi. He should take the meal. He should take pathya upto 7 days. He should not worry about his physical and mental condition.

For drinking purpose warm water boiled with dhanyajirka, ginger and cumine seeds may used. For washing and ablating purpose only warm water should be used (Dharakalpa-24).

**Pariharyani:**

The patient should abstain from sexual intercourse as well as from any thought or deed that may excite sexual desire, avoid physical exertions, mental excitement such as anger, grief etc. and exposure to cold, sun, dew, wind, smoke and dust should be avoided. Riding on elephants or horses, walking, speaking too long or too loud and such other acting that may give any strain to the system must be avoided. Sleeping during daytime and standing continuously for long period must also be avoided. It is also advisable to use a pillow, which is neither very high nor very low, during sleep at night (Dharakalpa-26).

During the course of the treatment, the patient should be also cheerful, happy and should avoid wearisome exertions, distasteful diet or excessive indulgence in tasty foods. He should wear clean and dry cloths and may have Lepana of Sandalwood paste.

**Pariharakala:**

He should take pathya and remain as jitendriya upto the period which is taken for the completion of dharakarma (Dharakalpa-25).

**Dhara-Dosha:**

If dhara is done from more height, very nearly or very slowly then it may produce burning in the body, pain in the all joints, bleeding tendency, jvara, kotha etc. (Dharakalpa-19,20).

**For the treatment of dhara-dosha following measures may be adopted:**

- i). Gandusha
- ii). Nasya
- iii). Kashayapana with Sunthi
- iv). Light diet at evening, Yusha with black pepper
- v). On the third day, Basti should be given in which saindhava is mixed.